

CLAIMS

What is claimed is:

1. A wireless digital communication system for prioritizing the forwarding of blocks of downlink data, the system including a base station and a plurality of user equipment mobile terminals (UEs), the system comprising:

(a) means for the base station to receive blocks of downlink data for distribution to designated ones of the plurality of UEs;

(b) means for the base station to transmit to each of the designated UEs a request for a downlink channel quality measurement to be performed;

(c) means for each of the designated UEs to perform the downlink channel quality measurement;

(d) means for each of the designated UEs to transmit the results of the downlink channel quality measurement to the base station;

(e) means for the base station to establish a priority for the designated UEs based on the results of the downlink channel quality measurements;

(f) means for the base station to transmit an allocation signal to each of the designated UEs;

(g) means for each of the designated UEs to set up transmission parameters in response to the allocation signal; and

(h) means for the base station to transmit the downlink data to the designated UEs in accordance with the established priority.

2. The system of claim 1 wherein the allocation signal indicates a particular coding rate, modulation type and at least one allocated slot.

3. The system of claim 1 wherein the designated UEs have pending downlink transmissions.

4. In a wireless digital communication system including a base station and plurality of user equipment mobile terminals (UEs), a method for prioritizing the forwarding of blocks of downlink data, the method comprising:

- (a) the base station receiving blocks of downlink data for distribution to designated ones of the plurality of UEs;
- (b) the base station transmitting to each of the designated UEs a request for a downlink channel quality measurement to be performed;
- (c) each of the designated UEs performing the downlink channel quality measurement;
- (d) each of the designated UEs transmitting the results of the downlink channel quality measurement to the base station;
- (e) the base station establishing a priority for the designated UEs based on the results of the downlink channel quality measurements;
- (f) the base station transmitting an allocation signal to each of the designated UEs;
- (g) each of the designated UEs setting up transmission parameters in response to the allocation signal; and
- (h) the base station transmitting the downlink data to the designated UEs in accordance with the established priority.

5. The method of claim 4 wherein the allocation signal indicates a particular coding rate, modulation type and at least one allocated slot.

6. The method of claim 4 wherein the designated UEs have pending downlink transmissions.

7. A wireless digital communication system for prioritizing the forwarding of blocks of downlink data, the system including a base station and a plurality of user equipment (UEs), the system comprising:

(a) means for the base station to transmit to each of the UEs a request for a downlink channel quality measurement to be performed;

(b) means for each of the UEs to measure and report the results of the downlink channel quality measurement to the base station;

(c) means for the base station to transmit a downlink physical channel allocation signal to the UE associated with the highest reported downlink channel quality measurement;

(d) means for the UE associated with the highest downlink channel quality measurement to set up transmission parameters based on the allocation signal; and

(e) means for the base station to transmit at least one block of the downlink data to the UE associated with the highest downlink channel quality measurement.

8. The system of claim 7 wherein the allocation signal indicates a particular coding rate, modulation type and at least one allocated slot.

9. The system of claim 7 wherein the UEs have pending downlink transmissions.

10. In a wireless digital communication system including a base station and plurality of user equipment mobile terminals (UEs), a method for prioritizing the forwarding of blocks of downlink data, the system including a base station and a plurality of user equipment (UEs), the method comprising:

(a) the base station transmitting to each of the UEs a request for a downlink channel quality measurement to be performed;

(b) each of the UEs measuring and reporting the results of the downlink channel quality measurement to the base station;

- (c) the base station transmitting a downlink physical channel allocation signal to the UE associated with the highest reported downlink channel quality measurement;
- (d) the UE associated with the highest downlink channel quality measurement setting up transmission parameters based on the allocation signal; and
- (e) the base station transmitting at least one block of the downlink data to the UE associated with the highest downlink channel quality measurement.

11. The method of claim 10 wherein the allocation signal indicates a particular coding rate, modulation type and at least one allocated slot.

12. The method of claim 10 wherein the UEs have pending downlink transmissions.